UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/353,583	07/15/1999	SAMUEL REICHGOTT	GEN-040	3801

7590   06/05/2003

RONALD P KANANEN ESQ
RADER FISHMAN & GRAUER PLLC
THE LION BUILDING
1233 20TH STREET N W
WASHINGTON, DC   20036

EXAMINER
TRAN, HAI V

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)
	09/353,583	REICHGOTT ET AL.
	Examiner	Art Unit	
	Hai Tran	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2003* .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____ .

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

   a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

Response to Arguments

In view of the Appeal Brief filed on 03/24/2003, PROSECUTION IS HEREBY

REOPENED. New ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied

by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130,

1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-4, 6-17, 24-27, 30-35 and 41-44 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US

5497187).

Regarding claim 1, Bacon discloses a set-top terminal (Fig. 2A-B) for

connecting a subscriber to a cable network, the terminal comprising:

A processor 128; and

A memory unit 134, 137 and 138,

Wherein the processor only accepts the download on the specified in-band

channel and records the download in the memory unit when one or more

predetermined criteria are satisfied (Col. 14, lines 65+), and wherein the criteria

when satisfied indicates that acceptance of the download will cause a minimum of

interference (Col. 16, lines 34-37) with the subscriber's use of the set-top terminal

(Fig. 9 and Col. 15, lines 25-Col. 16, lines 12).

As to limitation "Wherein the processor monitors an out-of-band control

channel of the cable network for information indicating that a download of data or

programming is available and indicating a specified in-band channel for receiving the

download of data or programming offered to the set-top terminal over the cable

network", Bacon discloses "control data downloaded from the system manager 12

(**by any** of the three data transmission schemes discussed herein, out-of-band, in-

band audio or in-band video)" see Col. 8, lines 17-50. Moreover, Bacon's

microprocessor 128 executes a control program (Col. 8, lines 30-50) to verify the

"convenience flag" which indicates that a download of data or programming is

available (Col. 16, lines 20-22), to verify Bytes 16 and 17 from the download

parameters transaction Fig. 3A-D which indicate the frequency channel (in-band

channel) on which the download program code will be transmitted (Col. 9, lines 65+)

and Byte 19 is indication of whether the system is commanding an immediate

software download or whether the downloading should occur sometime in the future

(Col. 10, lines 2-5). In order to receive and process the control data, as discussed,

Bacon's system <u>must monitor</u> the control channel. Thus, Bacon's system meets the

claimed limitation "the processor <u>monitor</u> a control channel of the cable network for

information indicating that a download of data or programming is available (Col. 16,

lines 21-22) and indicating a specified in-band channel for receiving the download of

data or programming offered to the set-top terminal over the cable network (Col. 9,

lines 65-68).

As to whether Bacon 's <u>control data is carried over an out-of-band control</u>

<u>channel of the cable network</u>, Bacon does not clearly disclose about it; However,

Bacon discloses the control process of the control data for verifying Bytes 16, 17 and

19 from the download parameters transaction Fig. 3A-D which indicate the

frequency channel (in-band channel) on which the download program code will be

transmitted (Col. 9, lines 65+).

Banker teaches that <u>control data is transmitted over out-of-band channel</u> (Col.

8, lines 60-Col. 9, lines 33) and receiver Fig. 4 for receiving In-Band (IB) and Out-of-

Band (OB) data. Therefore, it would have been obvious to one of ordinary skill in the

art at the time the invention was made to modify Bacon to have out-of-band control

channel to carry control data, as taught by Banker, so greatly increase the data

throughput from the Headend to signal distribution apparatus or terminal (Col. 3,

lines 43-46).

Regarding claim 2, Bacon further discloses wherein one or more criteria are downloaded to the set-top terminal of the cable network (see Fig. 1).

Regarding claim 3, Bacon further discloses wherein the set-top terminal verifies that the data or programming offered as the download is not already resident in the memory (Col. 15, lines 47-Col. 16, lines 12).

Regarding claim 4, Bacon further discloses wherein the set-top terminal verifies that the data or programming offered as the download is specified as being intended for a class of terminals to which the set-top terminal belongs (Col. 10, lines 54-60).

Regarding claim 6, Bacon further discloses wherein the one or more criteria include whether the set-top terminal is turned off (Col. 16, lines 12-19).

Regarding claim 7, Bacon further discloses wherein the one or more criteria include a deadline by which acceptance of the download is required by an operator of the cable network (Col. 15, lines 57-63). Bacon's system operator has the option to set or not to set the "immediate flag"; if the "immediate flag'" is not set in block A72, the program will flow to block A76 wherein the subscriber "*convenience* flag" is set to be downloaded later (a specific point in time subsequent to an initial offering) before the program exit (see Fig. 10 and Col. 16, lines 6-42). As to the "deadline" limitation is met by Bacon disclosure "the control microprocessor 128 will then wait for the subscriber key input in block A86, or after a time out period (deadline), will accept the lack of key input as an affirmative response and branch to either to block A90 or A94 depending on the response". Thus, Bacon encompasses the claim's

limitation "said deadline being a specific point in time subsequent to an initial offering of said download of data or programming".

Regarding claim 8, Bacon further discloses wherein the set-top terminal defers the deadline if the set-top terminal is used to provide a dedicated services including recording programming in conjunction with a VCR or providing pay-per-view programming (Col. 16, lines 1-5).

Regarding claim 9, Bacon further discloses wherein the set-top terminal signals the subscriber that the download is available and requests permission to accept the download, the one or more criteria including a positive response by the subscriber to request for permission to accept the download (Col. 16, lines 16-42).

Regarding claim 10, Bacon further discloses wherein the set-top terminal tunes to the specified in-band channel to receive the download if the one or more criteria are satisfied (Col. 9, lines 66-68 and Col. 15, lines 16-21).

Regarding claim 11, Bacon further discloses wherein if the one or more criteria are satisfied, the processor erases information in the memory unit and replaces the erased information with data or programming from the download (Col. 14, lines 65-Col. 15, lines 13).

Regarding claim 12, Bacon further discloses wherein following the download of programming, the processor will only execute newly received programming from the download when one or more predetermined criteria are satisfied (Col. 15, lines 21-26).

Regarding claim 13, Bacon further discloses wherein prior to accepting the download, the processor determines whether any programming is stored in the memory (Flash) which is not being executed, but which is identified as being a later version than programming being executed by the processor at that time; if the processor locates any such later version of programming in memory (Flash), the processor will terminate execution of programming being executed, erase the terminated programming from memory and reset so to as execute the later version of the programming (Col. 13, lines 68-Col. 14, lines 65).

Regarding claim 14, see analysis of claim 11.

Regarding claim 15, Bacon further discloses wherein the memory unit is logically partitioned into two sections, a first section for containing programming being executed by the processor and a second section for receiving and storing programming from the download (Fig. 6).

Regarding claim 16, Bacon further discloses wherein each download of programming contains two versions of a programming object, a first programming object for storage in and execution from a first memory section of the memory unit ROM and a second programming object for storage in and execution from a second memory section EPROM, of the memory unit wherein the processor downloads one of the two versions of programming in accordance with whether the first and second memory sections is vacant (Fig. 6; Col. 13, lines 5-65).

Regarding claim 17, Bacon further wherein the memory unit comprises two separate memory devices (ROM, EPROM), a first memory device for containing

programming being executed by the processor (ROM) and a second memory device

for receiving and storing programming from the download (EPROM) (Col. 13, lines

54-65).

Regarding claims 24, method claim 24 corresponds to the apparatus claim 1

and is analyzed with respect to claim 1.

Regarding claim 25, method claim 25 is analyzed with respect to claim 2.

Regarding claim 26, method claim 26 is analyzed with respect to claim 3.

Regarding claim 27, method claim 27 is analyzed with respect to claim 4.

Regarding claim 30, method claim 30 is analyzed with respect to claim 9.

Regarding claim 31, method claim 31 is analyzed with respect to claim 12.

Regarding claim 32, method claim 32 is analyzed with respect to claim 13.

Regarding claim 33, method claim 33 is analyzed with respect to claim 11.

Regarding claim 34, method claim 34 is analyzed with respect to claim 15.

Regarding claim 35, method claim 35 is analyzed with respect to claim 16.

Regarding claim 41, the set-top terminal claimed is analyzed with respect to

claim 1.

Bacon and Banker does not clearly disclose the set-top terminal has a

processor unit comprising two/dual processors in which one processor is

dedicated to perform a task of providing user interface and the other processor

perform the management of downloading.

Official Notice is taken that it is common to supplement the primary/main

processor with specialized or dedicated second processors designed specifically

to perform specific tasks in certain multiprocessors computer is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bacon in view of Banker by having a dual-processor system as claimed so to be able to perform simultaneously two or more computer tasks thereby to achieve high speed processing power and further obviates the need to halt the primary processor and as a result system throughput/performance is enhanced.

Regarding claim 42, Bacon further discloses wherein the programming is received in packets (Program code transaction, Fig. 4; Col. 9, lines 25-28), the terminal being configured to reassemble the packets (program code transaction) into an executable object and stored into non-volatile memory (Col. 10, lines 45-50 and Col. 15, lines 19-25).

Regarding claim 43, apparatus claim 43 is analyzed with respect to apparatus claim 1.

Regarding claim 44, claim 44 is analyzed with respect to claim 8.

2. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of Diehl et al. (US 5,373,557).

Regarding claims 5 and 28, Bacon and Banker do not specifically show wherein the one or more criteria include a time of day.

Diehl shows a time of day criteria is included in the download of data (Col. 1,

lines 55-60 and Col. 3, lines 5-18). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Bacon in view of

Banker by including a time of day criteria, as taught by Diehl, in order to determine

the possibility time to download during the off peak hours of use (Col. 2, lines 6-17).

3. Claims 18-19, 21-23, 29, 36-37 and 39-40 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US

5497187) and further in view of McClellan et al. (US. 5,619,250).

Regarding claim 18, see analysis of claim 1 in combination with claim 12.

Bacon and Banker do not clearly disclose "the processor will only execute the

new programming when one or more predetermined criteria are satisfied that

indicate executing the new programming will not inconvenience the subscriber."

McClellan discloses the processor will only execute the new programming

when one or more predetermined criteria are satisfied (new module are fully

functional) that indicate executing the new programming will not inconvenience the

subscriber (execute the new module without restarting the system; Col. 7, lines 23-

35).

Therefore, it would have been obvious to one of ordinary skill in the art, at the

time the invention was made, to modify Bacon in view of Banker to execute new

downloaded program when the operating system determines that the new

downloaded program is fully functional and will not inconvenient the subscriber by

not restarting the set-top box, as taught by McClellan, so to do not interrupt any current TV program being viewed.

Regarding claims 19, 29 and 37, Bacon further discloses wherein the one or more criteria include whether the set-top terminal is turned off (Col. 16, lines 12-19).

Regarding claims 21 and 39, Bacon further discloses wherein the one or more criteria include a deadline by which acceptance of the download is required by an operator of the cable network (Col. 15, lines 57-63). Bacon's system operator has the option to set or not to set the "immediate flag"; if the "immediate flag'" is not set in block A72, the program will flow to block A76 wherein the subscriber "*convenience* flag" is set to be downloaded later (a specific point in time subsequent to an initial offering) before the program exit (see Fig. 10 and Col. 16, lines 6-42). As to the "deadline" limitation is met by Bacon disclosure "the control microprocessor 128 will then wait for the subscriber key input in block A86, or after a time out period (deadline), will accept the lack of key input as an affirmative response and branch to either to block A90 or A94 depending on the response". Thus, Bacon encompasses the claim's limitation "said deadline being a specific point in time subsequent to an initial offering of said download of data or programming".

Regarding claims 22 and 40, Bacon further discloses wherein the set-top terminal defers the deadline if the set-top terminal is used to provide a dedicated services including recording programming in conjunction with a VCR or providing pay-per-view programming (Col. 16, lines 1-5).

Regarding claim 23, McClellan further discloses that subscriber usually has to request/prompt to restart the set-top box in order to reset the set-top box to new configuration (Col. 3, lines 19-23).

Regarding claim 36, method claim 36 corresponds to the apparatus claim 18; therefore they are analyzed as discussed with respect to claim 18.

4. Claims 20 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view of McClellan et al. (US. 5,619,250) and further in view of Iggulden et al. (US 5,987,210).

Regarding claim 20, Bacon, Banker and McClellan fail to disclose that one or more criteria include detection of commercial break in television programming being received by set top terminal.

Iggulden shows a processor (114) for processing the video signal to detect the presence of commercial messages (Fig.1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker and McClellan by inserting a video event detector to detect the criteria for commercial break, as taught by Iggulden, in order to control the operation of a video recording and playback device so as to automatically eliminate commercial messages during playback of a recorded television signal.

Regarding claim 38, see analysis of claim 20.

5. Claims 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over

    Bacon et al. (US 5440632) in view of Banker et al. (US 5497187) and further in view

    of Kraml et al. (US 6141683).

    Regarding claim 45, Bacon discloses a method of operating a set-top terminal

    (Fig. 2A-B) for connecting a subscriber to a cable network, wherein the set-top

    terminal comprises a processor 128 and a memory unit 134, 137 and 138, the

    memory unit storing program that is executed by the processor during operation of

    the set-top terminal (see Abstract). Bacon further discloses executing the newer

    · version of the programming upon start-up of the set-top terminal (Col. 13, lines 54-

    Col. 15, lines 26).

    Bacon and Banker do not clearly disclose the memory unit further comprises

    at least two versions of the programming, a newer version and an older version,

    receiving a command via the cable network to switch versions of the programming

    and termination of the newer version of the programming and beginning execution of

    the older version of the programming in response to receipt of the command.

    Kraml discloses a remote computer with memory unit comprises at least two

    versions of the programming (Col. 5, lines 22-27 and lines 45-57), executing the

    newer version (n+1 store in 1st memory) of the programming upon start-up of the

    set-top terminal (Col. 6, lines 22-28), receiving a command via the cable network to

    switch versions of the programming and termination of the newer version of the

    programming (at step 417 loop back to 411, follow to step 412 then loop back to

    405, control center 210 transmits a command to remote computer 230 directing

computer 230 to store the address of location of version n into pointer 330, see Col. 6, lines 47-61 and then, follow to step 406, 407, 408) and beginning execution of the older version of the programming in response to receipt of the command (at step 414 then stop if older software does not crash (Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bacon in view of Banker with the teaching of Kraml so to enhance the capability of installing a new version of software application in the remote set-top box while the remote set-top box is executing an older version of the software application or installing a new version of software application into the memory without overwriting the old version in such a manner that during the execution of the new version of the software application and if the new version of the software application crashes for any reason, the remote terminal/set-top box can begin using the old version of the software immediately and needs not suspend operation while the new version of the software application is being retransmitted and re-installed (see Col. 3, lines 50-65 and summary).

Regarding claim 46, Kraml further discloses erasing the newer version of programming from the memory (until the newest version can be installed or re-installed over the crashed software version) and restarting the remote terminal to begin execution of the older version of programming (Col. 3, lines 50-65 and Col. 7, lines 37-43).

Contact Fax Information

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or Faxed to: (703) 872-9314
For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is 703-308-7372. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

HT:ht
June 1, 2003

ANDREW FAILE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600